What is claimed is:

1. A signal processing device (1) for processing knocking signals of an internal combustion engine which are provided by knocking sensors (2), having at least one filter (5), the properties of the filter (5) being influenceable by control information,
wherein the control information is checked and alternate measures are taken if the check reveals that the control information is incorrect.

2. The signal processing device as recited in Claim 1,
wherein means (9) for receiving the control information at an input and for checking the thus received control information are provided.

3. The signal processing device as recited in Claim 1 or Claim 2,
wherein the control information is saved in a memory (8) in the signal processing device (1), and means are provided for checking the saved control information for correctness.

4. A method as recited in one of the preceding claims,
wherein the properties of the filter (5) are influenceable by filter coefficients, and the control signals contain information regarding the filter coefficients.

5. The signal processing device as recited in one of the preceding claims,
wherein the signal processing device (1) is designed to cooperate with a control unit (10), the control unit (10) generating control information, and the control unit (10) is designed for influencing combustion processes in the internal combustion engine also on the basis of the knocking signals processed by the signal processing device (1).

6. The signal processing device as recited in one of the preceding claims,
wherein alternate values are used for the control information as an alternate measure, the alternate values being read from the memory (8) or calculated from non-erroneous control information.

7. A control unit (10) for cooperating with a signal processing device (1) as recited in one of the preceding claims,
wherein the control unit (10) is designed for generating and outputting control information to the signal processing device (1).

8. The control unit as recited in Claim 7,
wherein the control unit is designed for receiving measurement messages of the signal processing device (1), the measurement messages containing information which is derived from the knocking signals, and the control unit (10) checking the measurement messages for errors and initiating alternate measures in the event of an error.

9. The control unit as recited in Claim 8,
wherein the control unit checks the measurement messages to determine whether they were corrupted during transmission from the signal processing device (1) to the control unit (10).

10. The control unit as recited in Claim 8 or Claim 9,
wherein the control unit checks the measurement messages to determine whether they contain information about errors which occurred in the signal processing device.

11. The control unit as recited in Claims 8 through 10,
wherein the control unit takes alternate measures by influencing the ignition angle which triggers the internal combustion engine.